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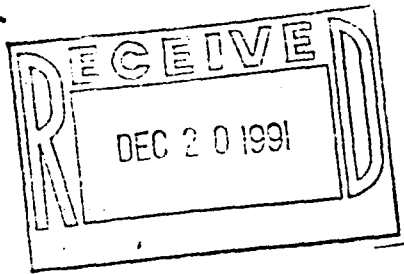
AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY



1827.

State of North Carolina
Department of Environment, Health, and Natural Resources
Winston-Salem Regional Office

James G. Martin, Governor
William W. Cobey, Jr., Secretary

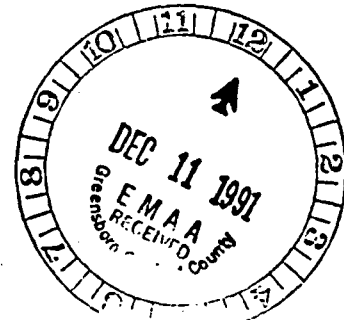
Margaret Plemmons Foster
Regional Manager

DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION

November 12, 1991

Eric N. Johnson
Piedmont Triad International Airport
P.O. Box 35005
Greensboro, NC 27425

Subject: Conventional Rate Soils Landfarming
Permit No. SR04000014
Piedmont Triad International Airport
W. Market St. & Gallimore Dairy Road
Guilford County



Dear Mr. Johnson:

In accordance with your application received November 4, 1991, we are forwarding herewith Permit No. SR04000014, dated November 12, 1991, to Piedmont Triad International Airport for the operation of the subject Soils Landfarming program.

This permit shall be effective from the date of issuance until May 12, 1993, and shall be subject to the conditions and limitations as specified therein.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request an adjudicatory hearing upon written request within 30 days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of North Carolina General Statutes, and filed with the Office of Administrative Hearings, P.O. Drawer 27447, Raleigh, North Carolina 27611-7447. Unless such demands are made this permit shall be final and binding.

2. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective action, including those as may be required by the Division of Environmental Management (hereinafter Division), such as the operation of additional or replacement treatment or disposal facilities.
3. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to surface waters or groundwaters resulting from the operation of this facility.
4. The following minimum buffers shall be maintained:
 - a) 100 feet between disposal area and any public or private water supply, including wells.
 - b) 100 feet between disposal area and "SA" and "SB" classified surface waters.
 - c) 100 feet between disposal area and any stream, lake, river or natural drainageway.
 - d) 50 feet between disposal area and property lines.
 - e) 10 feet between disposal area and surface water interceptor drains or diversions (upslope).
 - f) 25 feet between disposal area and surface water interceptor drains or diversions (downslope) and groundwater drainage systems.
 - g) 100 feet from any habitable residence or place of public assembly under separate ownership.
5. No food for direct human consumption shall be grown on the land-farming site for at least 12 months following the Division-approved completion of contaminated soil disposal.
6. No soils contaminated with heavy fuel oils (#4, #5 or #6) or new or used motor oils, shall be applied to sites where food-chain crops are growing, or will be grown, during the term of the permit.
7. No soils containing petroleum products, other than as specified in the permit application, shall be placed on the treatment and disposal site without permission from the Winston-Salem Regional Supervisor.

8. This permit may be rescinded upon a determination by the Division that the contaminated soils have been remediated to a level of Total Petroleum Hydrocarbons (TPH) of ten (10) parts per million (ppm) or less.

II. OPERATION AND MAINTENANCE REQUIREMENTS

1. The facilities shall be properly maintained and operated at all times.
2. Adequate measures shall be taken to prevent surface runoff from carrying any disposed material into any surface waters.
3. All foreign debris shall be removed from the contaminated soil prior to land application, and at no time shall foreign debris be land applied to the approved site(s) during the life of this permit.
4. The 1800 cubic yards of contaminated soil shall be spread to a thickness not to exceed 3 inches on at least 4.5 acres acre(s) of land at the disposal site.
5. The site shall be adequately limed to a soil pH of at least (6.0 for class I, 6.5 for class II) prior to disposal of the contaminated soil. The contaminated soil and lime shall be thoroughly incorporated into the top six to eight inches of the native soils, by tilling or disking, within twenty-four (24) hours of disposal.
6. To ensure that sufficient oxygen is provided for waste biodegradation, the site shall be retilled at periods of one month, two months, and six months following disposal.
7. A vegetative cover, as indicated in the permit application, shall be established and maintained at all sites.
8. Nutrients, in the form of nitrogen and phosphorus fertilizers, must be applied over the disposal area and fully incorporated into the mixed contaminated and native soil layer. To provide maximum benefits, fertilization should occur no sooner than 15 days, nor later than 30 days, after disposal.

The rate of fertilizer application should be the lesser of the following:

- a) for nitrogen, the tolerance level of the vegetative crop, as determined by a knowledgeable party, or 75-100 pounds per acre plant available nitrogen (PAN).
- b) for phosphorus, the tolerance level of the vegetative crop, as determined by a knowledgeable party, or 50-75 pounds per acre P_2O_5 (or equivalent).

III. MONITORING AND REPORTING REQUIREMENTS

- 1. Any monitoring deemed necessary by the Division, to ensure surface water and groundwater protection, will be established and an acceptable sampling and reporting schedule shall be followed.

- 2. **Noncompliance Notification:**

The permittee shall report by telephone to the Winston-Salem Regional Office, telephone no. (919) 896-7007, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence, or first knowledge of the occurrence, of any of the following:

- a) the landfarming or otherwise disposing of significant amounts of wastes which is not in accordance with the terms and conditions of this permit.
- b) any failure of the land application program resulting in a discharge of wastes to the groundwaters or surface waters of the State in contravention of assigned quality standards.
- c) any spillage or discharge from a vehicle or piping system transporting contaminated soil to the application site.

Persons reporting such occurrences by telephone shall also file a written report in letter form within 15 days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

3. Soil samples shall be collected at a minimum of (at least 2/ac) areas at the disposal site every six (6) months following disposal or until the permittee can demonstrate that the level of Total Petroleum Fuel Hydrocarbons (TPFH,) in the soil mixture zone, is less than 10 parts per million (ppm). The laboratory methods must be those specified in Guidelines For Remediation of Soil Contaminated by Petroleum.

Each sample will be composed of the vertical column of soil, extending from land surfaces to the maximum depth of waste incorporation, and collected by using a soil auger, Shelby tube, split-spoon sampler or other methods approved by the Division.

Samples at each location will be thoroughly mixed and a representative portion analyzed (by methods specified by the Division) to determine the concentration of (1) Total Petroleum Fuel Hydrocarbons, and (2) any Volatile Organic Aromatic (VOA) compounds present.

A copy of the laboratory results of the soil analysis shall be submitted to the Winston-Salem Regional Office, to the attention of the Regional Hydrogeological Supervisor, within 30 days of sample collection or another time frame approved by the Winston-Salem Regional Supervisor.

IV. INSPECTIONS

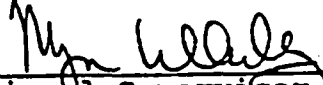

1. Adequate inspection and maintenance of the subject facility(ies) shall be provided by the Permittee to insure compliance with applicable state, federal or local laws and regulations.
2. Any duly authorized officer, employee, or representative of the Division of Environmental Management may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site and facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be kept under the terms and conditions of this permit; or may obtain samples of groundwater, surface water, or leachate.

V. GENERAL CONDITIONS

1. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting information.
2. This permit is not transferable. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division of Environmental Management accompanied by an application fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved.
3. In any future transfer of this land, a notice shall be given to the new owner that gives full details of the materials applied or incorporated at this site.
4. A set of approved documents for the subject project must be retained by the applicant for the life of the project.
5. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division of Environmental Management in accordance with North Carolina General Statute 143-215.6.
6. The issuance of this permit does not preclude the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, or federal) which have jurisdiction.

Permit issued this the 12th day of November 1991.

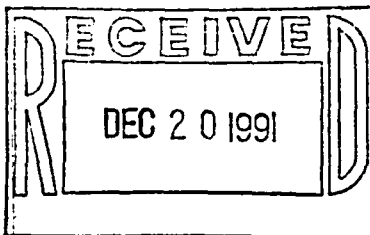
NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

 
Regional Supervisor Winston-Salem Regional Office
Division of Environmental Management
By Authority of the Environmental Management Commission

Permit No. SR04000014

ENG

A copy of
this
Report is
available
in
Emergency
Management.



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RECEIVED
N.C. Dept. NRCD

OCT 24 1991

Winston-Salem
Regional Office

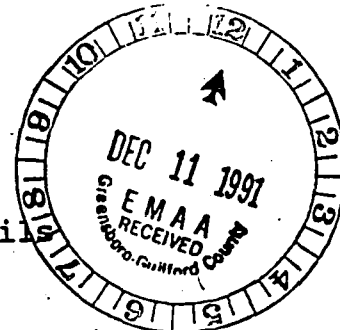
allimore Dairy Rd. Greensboro, N.C. 27409 • (919) 668-0093

October 23, 1991

N.C. Permit of Environment Health & Natural Resources
Division of Environmental Management - Groundwater Section
Winston-Salem Regional Office
8025 North Point Boulevard, Suite 100
Winston-Salem, North Carolina 27106-3295

Attention: Mr. Chris Green

Reference: Piedmont Triad International Airport
Remediation of Petroleum Impact of Soils
Trigon Job No. 015-91-036



Dear Mr. Green:

Please find the permit application for Land Permit of Petroleum Contaminated Soils with supporting information enclosed with this letter. Also enclosed is a check for \$400.00 for the application fee for permit review. Engineering Tectonics, P.A. was awarded the contract to do remediation activities for the petroleum impacted soil at Piedmont Triad International Airport. The enclosed permit application and supporting information were drafted by Trigon Engineering Consultants, Inc. and Engineering Tectonics, P.A.

Should you have any questions concerning the permit application and/or supporting information, please do not hesitate to call at your convenience.

Sincerely,

J. Scott Pearce
Project Geologist

Kirk L. Rife
Director, Environmental Affairs

Eric N. Johnson, P.E.
Senior Project Engineer

cc: Mr. Ted Johnson
Mr. Dain A. Riley
Mr. Steve Mason



ENGINEERING CONSULTANTS, INC.

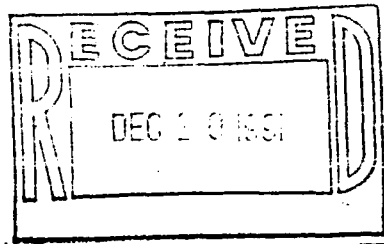
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N.C. Dept. NRCD

NOV 4 1991

Winston-Salem
Regional Office

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P.O. Box 18846 • Zip 27419-8846 • 313 Gallimore Dairy Rd. Greensboro, N.C. 27409 • (919) 668-0093

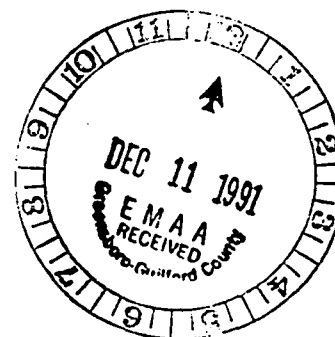


October 31, 1991

County of Guilford
County Managers Office
301 West Market Street
Greensboro, North Carolina 27407

Attention: Ms. Brenda Jones, County Manager

Reference: Piedmont Triad International Airport
Remediation of Petroleum Impacted Soils
Trigon Job No. 015-91-036



Dear Ms. Jones:

On behalf of the Piedmont Triad International Airport, Trigon Engineering Consultants, Inc. is issuing this letter as a notice of present activities at the reference property. The Piedmont Triad International Airport is in the process of obtaining a permit to landfarm petroleum impacted soils.

Pursuant to the North Carolina Department of Environmental Management (NCDEM), Groundwater Section (GWS), the local governing body must be notified as part of the permit application process for landfarming petroleum impacted soils. Since Guilford County has jurisdiction at this geographical location, your office is being notified.

The quantity of impacted soils to be landfarmed is approximately 1800 cubic yards. The impacted soils will be landfarmed at the southeast end of Runway 32 adjacent to NC Highway 421 (Market Street). The landfarm area meets the requirements for landfarming as issued by the NCDEM GWS. Trigon will be providing consulting services for the Piedmont Triad International Airport during the landfarming activities for the duration of the project which is expected to be one year.

Ms. Brenda Jones
October 31, 1991
Page 2

Should you have any questions regarding this notice, please contact the undersigned at your convenience.

Very truly yours,

TRIGON ENGINEERING CONSULTANTS, INC.

J. Scott Pearce
J. Scott Pearce
Project Geologist

Kirk L. Rife
Kirk L. Rife
Director, Environmental Affairs

Eric N. Johnson
Eric N. Johnson, P.E.
Senior Project Engineer

JSP:KLR:ENJ:ejm

cc: ~~Mr. Chris. Mason, MC Groundwater Section,~~
Mr. Ted Johnson, Airport Authority
Mr. Dain Riley, LPA Group
Mr. Steve Mason, Engineering Tectonics



PIEDMONT TRIAD INTERNATIONAL AIRPORT

Remediation of Petroleum Impacted Soils

Construction Schedule

1991

Sept. 30	Obtain soil samples for analyses/bacteria cultures (soil pile & landfarm)
Oct. 1-11	Prepare erosion control plan and submit to DEM
Oct. 1-11	Prepare landfarm application and submit to DEM
Oct. 1-11	Culture bacteria
Nov. 4-8	Install erosion controls
Nov. 4	Apply nutrients and lime to site
Nov. 11-15	Apply soils to site and incorporate
Nov. 15	Apply bacteria to site
Nov. 18-22	Seed and mulch area

1992

Apr. 1	Sample and analyze soils (TPH and nutrients/pH)
Apr. 1-3	Turn soils and inoculate (nutrients/lime if needed)
June 1	Sample and analyze soils (TPH and nutrients/pH)
June 1-3	Turn soils and inoculate
Aug. 3	Sample and analyze soils (TPH and nutrients/pH)
Aug. 3-5	Turn soils and inoculate
Sept. 1	Sample and analyze soils (TPH and nutrients/pH) (Final sampling/analysis of soils)
Sept. 18	Submit closure report
Sept. 25-28	Remove erosion control, seed, mulch

3 burn pits
~50' x 25' max. size
Replaced w/ fill

Air Cargo site
Piedmont Triad International Airport



Chairman
EUGENE JOHNSTON

August 30, 1991

Vice-Chairman
F. HUDNALL CHRISTOPHER, JR.

Secretary / Treasurer
ROGER P. SWISHER

Executive Vice President
FLOYD P. MCKENZIE, JR.

Vice President
Engineering & Development
EDWARD A. JOHNSON

Vice President Finance
DOREANN L. SMITH

Mr. Larry D. Coble
Regional Supervisor
State of North Carolina
Dept. of Environmental Health and Natural Resources
Winston-Salem Regional Office
8025 North Point Boulevard
Suite 100
Winston-Salem, North Carolina 27106-3203

Dear Mr. Coble:

In response to your letter of August 14, 1991, be advised that the Authority has been working with Trigon Engineering Consultants, Inc. in an attempt to alleviate the ground water and the soil problems that were discovered on an expansion site at the Piedmont Triad Int'l Airport. They are sending you a letter explaining the steps that have been taken and the steps that we are currently taking to solve these problems.

We are also working with Housted & Associates, Inc. to make a geomagnetic assessment to see if we can identify the extent and source of our problem. The Authority knows of nothing in this area that can be identify as a source of this problem.

RECEIVED
N.C. Dept. NRCD

SEP 03 1991

Winston-Salem
Regional Office

Bids for the Remediation of the Petroleum Impacted Soils are to be taken on September 19, 1991 and assuming that we get adequate bids a contract will be considered by the Authority at their regular meeting on September 24, 1991.

If you have further questions please give me a call.

Sincerely,

PIEDMONT TRIAD AIRPORT AUTHORITY

A handwritten signature in dark ink, appearing to be "E.A. Johnson", is written over the typed name and title.

Edward A. Johnson
Vice-President Engineering and Development

EAJ/sn

cc: Kirk L. Rife, Trigon Engineering Consultants
Dain Riley, LPA

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.



PENALTY FOR PRIVATE
USE, \$300

RETURN

RECEIVED
TO
N.C. Dept. NRC

AUG 19 1991

Winston-Salem
Regional Office

Print Sender's name, address, and ZIP Code in the space below.

North Carolina Department of Environment,
Health, and Natural Resources
Groundwater Section
8025 North Point Blvd., Suite 100
Winston-Salem, N.C. 27106

Air Cargo

<p>● SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. <u>The return receipt fee will provide you the name of the person delivered to and the date of delivery.</u> For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.</p> <p>1. <input type="checkbox"/> Show to whom delivered, date, and addressee's address. 2. <input type="checkbox"/> Restricted Delivery.</p>	
3. Article Addressed to:	4. Article Number
MR. TED JOHNSON PIEDMONT TRIAD AIRPORT AUTHORITY P.O. BOX 35005 GREENSBORO NC 27425	P-536 302 063
	Type of Service:
	<input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail
5. Signature — Addressee	Always obtain signature of addressee or agent and DATE DELIVERED.
X	
6. Signature — Agent	8. Addressee's Address (ONLY if requested and fee paid)
X <i>Stephanie Fielman</i>	
7. Date of Delivery	
8-16-91	



State of North Carolina
Department of Environment, Health, and Natural Resources
Winston-Salem Regional Office

James G. Martin, Governor
William W. Cobey, Jr., Secretary

Margaret Plemmons Foster
Regional Manager

DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION

NOTICE OF VIOLATION OF N.C.A.C. TITLE 15A SUBCHAPTER 2L
CLASSIFICATIONS AND WATER QUALITY STANDARDS
APPLICABLE TO THE GROUNDWATERS OF NORTH CAROLINA

August 14, 1991

CERTIFIED MAIL NUMBER P-536 302 063
RETURN RECEIPT REQUESTED

Mr. Ted Johnson
Piedmont Triad Airport Authority
P.O. Box 35005
Greensboro, NC 27425

Subject: Air Cargo Expansion Site, Piedmont Triad International
Airport, Greensboro, Guilford County, North Carolina

Dear Mr. Johnson:

Chapter 143, North Carolina General Statutes, authorizes and directs the Environmental Management Commission of the Department of Environment, Health, and Natural Resources to protect and preserve the water and air resources of the State. The Division of Environmental Management has the delegated authority to enforce adopted pollution control rules and regulations.

The following violation(s) of Title 15A Subchapter 2L (Groundwater Standards) exist at the subject site:

<u>COMPOUND</u>	<u>CONCENTRATION</u>	<u>STATE 2L STANDARDS</u>
Chloroform	43 ppb	.19 ppb
Methylene Chloride	610 ppb	5 ppb
1,4 Dichlorobenzene	576 ppb	1.8 ppb
Benzene	356 ppb	1 ppb

ppb = parts per billion

Please reference the following excerpt from Subchapter 2L which specifies corrective action as follows:

N.C.A.C. Title 15A 2L .0106 Corrective Action

- (a) The goal of actions taken to restore groundwater quality shall be restoration to the level of the standards, or as close thereto as is economically and technologically feasible.
- (b) Any person conducting or controlling an activity which results in the discharge of a waste or hazardous substance or oil to the groundwaters of the state or in proximity thereto, shall take immediate action to terminate and control the discharge, mitigate any hazards resulting from exposure to the pollutants and notify the Department of the discharge.
- (c) Any person conducting or controlling an activity which results in an increase in the concentration of a substance in excess of the groundwater standard:
 - (1) as the result of activities, other than agricultural operations, not permitted by the state, shall assess the cause, significance and extent of the violation; submit a plan for eliminating the source of contamination and for restoration of groundwater quality; and implement the plan in accordance with a Special Order by Consent or a Special Order of the Commission.

You are responsible for eliminating the source of contamination and restoring groundwater quality. Toward this end you are required to submit a site assessment report which describes the full vertical and horizontal extent of the contamination. An adequate report must be received by this office on or before October 18, 1991. A remedial corrective action plan should be submitted to this office within sixty (60) days after submitting an acceptable site assessment report. The plan must be implemented in accordance with a Special Order by Consent (SOC) or a Special Order of the Commission.

It is requested that within fifteen (15) days, you submit a written response describing your plans to achieve compliance.

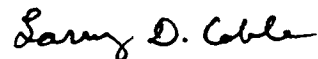
Page three

Failure to submit the report required or failure to expeditiously eliminate the contaminate source and restore groundwater quality in the affected area may result in the recommendation of enforcement action including: (1) the issuance of a special order against you under the authority of G.S. 143-215.2, (2) a request to the Attorney General to institute an action for injunctive relief, and/or (3) a civil penalty of up to \$10,000 per day in accordance with G.S. 143-215.6.

It has also come to our attention that up to 2,900 cubic yards of petroleum affected soil is temporarily stockpiled at the subject site. Please be advised that you have 45 days from receipt of this letter for the treatment/disposal of this soil. A permit will need to be obtained from this office for any landfarming activities. Please contact Chris Greene of this office for the permitting procedure.

Please do not hesitate to contact Steve A. Kay regarding any questions you may have about this matter.

Sincerely,



Larry D. Coble
Regional Supervisor

LDC/!initials!/ahl

Enclosure

cc: Office of General Counsel
Incident Management Unit
WSRO Files
Guilford County Division of Emergency Management

* Revised PIRF

POLLUTION INCIDENT/U.S.T. LEAK REPORTING FORM

1. Incident # 6826

Division of Environmental Management
GROUNDWATER SECTION

2. Tabulate only _____

TYPE OF ACTION

A	1. Emergency Response	3. Complaint Investigation	5. U.S.T. Leak
	2. Compliance Investigation	4. Routine Inventory	6. Other: <u>ENV. ASSESSMENT</u>
POTENTIAL HAZARDS: 1. Toxic Chemicals 2. Radioactivity 3. Air Emissions 4. Explosives 5. Fire			

INCIDENT DESCRIPTION

B	Incident Location/Name <u>At the Greenboro site <u>Piedmont Triad Int. Airport - Air Cargo</u></u>		
	Address <u>Piedmont Triad Airport</u>		
	City/Town <u>Greensboro</u>	County <u>Guilford</u>	Region <u>WSRO</u>
	Briefly Describe Incident <u>Groundwater contamination was identified in monitor wells drilled during an environmental assessment.</u>		
	Date Incident Occurred or Leak Detected <u>4.8.91</u>		
	If L.U.S.T., How Leak Was Detected 1. Tank Gauging 5. Interstitial Monitoring 8. Other _____ 2. Vapor Monitoring 6. Tank Removal _____ 3. GW Monitoring 7. Tightness Test _____ 4. Contractor who tightness tested, removed tank, or installed leak detection system. _____		

PERSON REPORTING INCIDENT

C	Name <u>Ted Johnson</u>	Date <u>5.7.91</u>	Time _____
	Company/Agency <u>Piedmont Triad Airport Authority</u>	Telephone _____	
	REPORTED BY: 1. Tank owner/operator 2. Government agency 3. Private (3rd) party 4. Facility owner (Non-L.U.S.T.) 5. Other: _____		

RECOMMENDED ACTION

D	(MULTIPLE CHOICES POSSIBLE)			
	1. Investigation complete	3. Initiate/complete cleanup	5. Drilling support	7. Confirm leak
	2. Continue investigation	4. Long-term remedial action	6. Issue NOV	8. Monitoring plan
	Comments _____			
	CLEANUP LEAD			
1. Responsible Party			Site Priority Ranking <u>75</u>	
2. State				
D.E.M. Regional Contact <u>Steve Kay</u>		Signature <u>Steve Kay</u>	Date <u>8.14.91</u>	

POLLUTION INCIDENT/U.S.T. LEAK REPORTING FORM

POLLUTANTS INVOLVED

	MATERIALS INVOLVED	AMOUNT STORED OR TANK CAPACITY	AMOUNT LOST	AMOUNT RECOVERED
E	<u>Gasoline</u>	<u>unknown</u>	<u>N/A</u>	<u>N/A</u>
	_____	_____	_____	_____
	_____	_____	_____	_____

IMPACT ON SURFACE WATERS

	WATERS AFFECTED	1. Yes	2. No	3. Potentially	Distance to Stream(ft)
F	Fish Kill	1. Yes	<u>2. No</u>		Stream Class

IMPACT ON DRINKING WATER SUPPLIES

	WELLS AFFECTED	1. Yes	2. No	3. Potentially	No. of Wells Affected	No. of Wells Potentially Affected
G	Population Served By Affected Wells		<u>2. No</u>			<u>0</u>
	Estimated Population Served By Potentially Affected Wells				Aquifer(s) Being Used	
					1. Water Table	2. Confined
						3. Bedrock

POTENTIAL SOURCE OF POLLUTION

	PRIMARY SOURCE OF POTENTIAL POLLUTION (Select one)	PRIMARY POLLUTANT TYPE (Select one)	LOCATION	SETTING
H	1. Intentional dump	1. Pesticide/herbicide	<u>1. Facility</u>	1. Residential
	2. Pit, pond, lagoon	2. Radioactive waste	2. Railroad	<u>2. Industrial</u>
	3. Leak-underground	<u>3. Gasoline/diesel</u>	3. Waterway	3. Urban
	4. Spray irrigation	4. Heating oil	4. Pipeline	4. Rural
	5. Land application	5. Other petroleum prod.	5. Dumpsite	
	6. Animal feedlot	6. Sewage/septage	6. Highway	
	<u>7. Source unknown</u>	7. Fertilizers	7. Residence	
	8. Septic tank	8. Sludge	8. Other	
	9. Sewer line	9. Solid waste leachate		
	10. Stockpile	10. Metals		
	11. Landfill	11. Other inorganics		
	12. Spill-surface	12. Other organics		
	If other sources, list corresponding No's.		Confirmed Violation of: 1. 15 NCAC 2L <u> / </u> Yes <u> </u> No 2. Article 21A Part I <u> </u> Yes <u> / </u> No 3. Article 21A Part II <u> / </u> Yes <u> </u> No 4. Federal/State U.S.T. rules <u> / </u> Yes <u> </u> No	
	If multiple pollutant types, list corresponding No's.			
	If PIRF previously submitted for Nonprimary Sources, list Incident No's.			

POLLUTION INCIDENT/U.S.T. LEAK REPORTING FORM

POTENTIAL SOURCE OWNER-OPERATOR

Potential Source Owner-Operator				Telephone	
Company <u>Piedmont Inland Airport Authority</u>			Street Address <u>P.O. Box 35005</u>		
City <u>Greensboro</u>		County <u>Guilford</u>		State <u>NC</u>	
Zip Code <u>27425</u>					
U.S.T. REGISTERED 1. YES 2. NO FACILITY ID# FEDERAL U.S.T. DESIGNATION 1. Regulated 2. Non-Regulated STATE U.S.T. DESIGNATION 1. Commercial 2. Non-Commercial	SOURCE/U.S.T. IN USE 1. N/A 2. YES 3. NO SOURCE PERMITTED 1. Yes 2. No PERMIT NUMBER SOURCE ON ERRIS LIST 1. Yes 2. No ERRIS NUMBER	PERMIT TYPE (D) N/A 1. Non-discharge 2. Oil terminal 3. Landfill 4. Mining 5. NPDES 6. RCRA		OWNERSHIP 0. N/A 1. Municipal 2. Military (3) Unknown 4. Private 5. Federal 6. County 7. State	
OPERATION TYPE 0. N/A 1. Public Service 2. Agricultural 3. Residential 4. Educational/Religious 5. Industrial (6) Commercial 7. Mining				REASON FOR INCIDENT 1. Transportation 2. Mechanical failure 3. Facility 4. Inventory only 5. Human error 6. Vandalism (7) Unknown	
U.S.T. LEAK PREVENTION MEASURES Was tank retrofitted with overfill protection? 1. Yes 2. No When and by whom? _____ Was tank retrofitted with interior lining? 1. Yes 2. No When and by whom? _____ Was tank retrofitted with cathodic protection? 1. Yes 2. No When and by whom? _____					

ACTIONS TAKEN

J	Investigation, Containment, Cleanup, etc.
	<u>Contaminated soil has been stockpiled. No other action taken to date</u>
Circle Appropriate Responses Lab Samples Taken By: 1. D.E.M. 2. D.H.S. (3) Responsible Party 4. None	
Samples Taken Include 1. Groundwater (2) Soil 3. Surface Water	

POLLUTION INCIDENT/U.S.T. LEAK REPORTING

LOCATION OF INCIDENT

7 1/2 Min. Quad Name

Gulfport NC

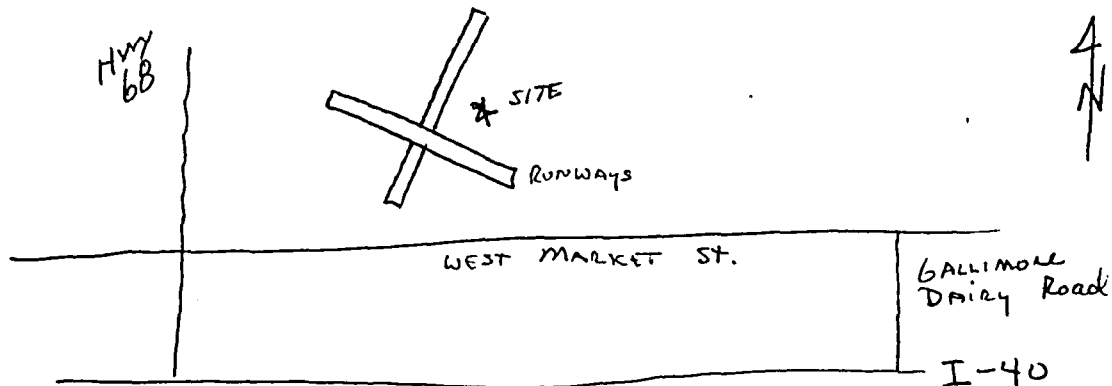
Lat.: Deg.: Min.: Sec.: *36° 40' 00"*

Five Min. Quad Number

6-54

Long.: Deg.: Min.: Sec.: *79° 05' 28"*

Draw Sketch of Area



*EXISTING
Run ways*

*AIR
CARGO.
EXPANSION
SITE*

*OVER LAND
FLOW*

NOT TO SCALE

Sketch Should Identify The Following:

1. Pollutant Source(s)

2. Impacted and Threatened Water Supplies

3. Direction of Overland Flow

4. Significant Recharge and Discharge Features

5. Relative Physical Structures (roads, buildings, etc.)

6. North Arrow

7. Scale

Incident Name: Air Cargo ~~Site~~ Region/County: WSRDGroundwater Incident File # 6826 Ranking Performed by: pat

Date: _____

NORTH CAROLINA
GROUNDWATER CONTAMINATION INCIDENT MANAGEMENT
SITE PRIORITY RANKING SYSTEM
(To be completed by Regional Office)

Points Awarded

I. IMMINENT HAZARD ASSESSMENT

- A. Explosion - free product in confined areas or vapor phase product detected at or above 20% of the lower explosive limit; award 50 points total _____
- B. Fire - free product subject to ignition in exposed areas such as surface water impoundments, streams, excavations, etc.; award 50 points total _____

II. EXPOSURE ASSESSMENT

A. Contaminated Drinking Water Supplies

1. Private, domestic water supply well containing substances in concentrations exceeding Class GA underground water quality standards; award 10 points per well _____
2. Public or institutional water supply well containing substances in concentrations exceeding Class GA underground water quality standards; award 30 points per well _____
3. Exceedances of Class WS-1 surface water quality standards as a result of groundwater discharge; award 20 points per surface water body impacted _____
4. If a water supply well identified in items II.A.1 and II.A.2 cannot be replaced by an existing public water supply source requiring hook-up only; award additional 10 points per irreplaceable well _____

B. Threat to Uncontaminated Drinking Water Supplies

1. Private, domestic water supply well located within 1500 feet down gradient of contaminant source; award 10 points per well _____
2. Public or institutional water supply well located within 1/2 mile downgradient of contaminant source; award 15 points per well _____
3. Raw surface water intake for public water supply located within 1/2 mile downgradient of contaminant source; award 5 points per water supply system _____
4. If any well identified in items II.B.1 and II.B.2 is located within 250 feet of contaminant source; award additional 20 points total _____

C. Vapor Phase Exposure

1. Product vapors detected in inhabitable building(s); award 30 points total _____

(cont.)

Points Awarded

2. Product vapors detected in other confined areas (uninhabitable buildings, sewer lines, utility vaults, etc.); award 5 points total
-

III. CONTAMINANT HAZARD ASSESSMENT (chemical groups are categorized based on toxicity, mobility and persistence in the environment). Evaluate the most hazardous substances detected and select only one of the following:

- A. Award 30 points total if contaminants detected are identified with any of the following groups:
-

1. Aromatic (Benzene) Acids
2. Aromatic Hydrocarbons (Benzene Derivatives)
3. Sulfonated Hydrocarbons
4. Halogenated Hydrocarbons
5. Alkaloids
6. Anilines
7. Phenols
8. Aldehydes
9. Ketones
10. Organic Sulfur Compounds (Sulfides, Mercaptans)
11. Organometallic Compounds
12. Cyanides
13. Esters
14. Metal Salts, Including Heavy Metals

30

- B. Award 20 points total if contaminants detected are identified with any of the following groups:
-

1. Aliphatic (Fatty) Acids
2. Alcohols
3. Aliphatic Hydrocarbons (Petroleum Derivative)
4. Pyridines
5. Thiocyanides
6. Mineral and Metal Acids
7. Mineral and Metal Bases
8. Oxides
9. Sulfides

- C. Award 10 points total if contaminants detected are identified with any of the following groups:
-

1. Aliphatic Amines and Their Salts
2. Sugars and Cellulose
3. Carbon and Graphite

IV. SOURCE ASSESSMENT

- A. Free product thickness of $\geq 1/4$ inch detected on water table in observation or monitoring well; award 20 points total
-

- B. Contaminated Soil (select only one answer)

1. Soil saturated with product (saturation determined by release of free liquid upon compaction of a soil sample by hand pressure); award 10 points total
-

10/1/90

Points Awarded

2. Soil exhibiting organic vapor content above 100 ppm as measured by organic vapor or volatile organic detection equipment; award 5 points total

5

C. Uncontrolled or Unabated Primary Source (including dumpsites, stockpiles, lagoons, land applications, septic tanks, landfills, underground and above ground storage tanks, etc.)

1. Suspected or confirmed source remains in active use and continues to receive raw product, wastewater or solid waste; award 20 points per source
2. Active use of suspected or confirmed source has been discontinued or source was caused by a one-time release of product or waste, however, source continues to release product or contaminants into the environment; award 10 points per source

10

V. ENVIRONMENTAL VULNERABILITY ASSESSMENT

- A. Vertical Contaminant Migration - Literature or well logs indicate that no confining layer is present above bedrock or above twenty feet below land surface; award 10 points total

10

- B. Horizontal Contaminant Migration - Data or observations indicate that no discharge points or aquifer discontinuities exist between the source and the nearest downgradient drinking water supply; award 10 points total

C. Hydraulic Gradient Is Determined by (select only one answer):

1. Calculations based on groundwater level measurements; award 10 points total
2. Observation of significant recharge/discharge features in the vicinity of contaminant source and local topographic features; award 5 points total
3. Observation of local topographic features only; award 0 points

10

D. Existing Groundwater Quality

1. Analytical test(s) performed on groundwater sample(s) obtained from site confirm presence of substances in concentrations exceeding Class GA underground water quality standards; award 10 points total
2. Source(s) identified in Section IV constitute the only known source(s) of contamination resulting in exposure or potential exposure identified in Section II; award 10 points total

10

TOTAL POINTS AWARDED

75

N.C. DEPARTMENT OF HEALTH, ENVIRONMENT AND NATURAL RESOURCES

Groundwater Section

UNDERGROUND STORAGE TANK(S)

SITE NAME: Piedmont Triad Int. Airport - Air Cargo

REGULATED _____

NONREGULATED _____

NonUST

	<u>YES</u>	<u>NO</u>
RELEASE CONFIRMED:	<u>✓</u>	_____
CLEAN-UP INITIATED:	<u>✓</u>	_____
TANK(S) REMOVED:	_____	<u>✓</u>
RELEASE UNDER CONTROL:	_____	<u>✓</u>
CLEAN-UP COMPLETED:	_____	_____

TECHNICIAN: Knight

DATE: 6 / 7 / 93

COMMENTS: _____



State of North Carolina
Department of Environment, Health, and Natural Resources
Winston-Salem Regional Office

James G. Martin, Governor
William W. Cobey, Jr., Secretary

Margaret Plemmons Foster
Regional Manager

DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION

April 1, 1991

Piedmont Triad Airport Authority
P.O. box 35005
Greensboro, NC 27425

SUBJECT: MONITOR WELL CONSTRUCTION
PERMIT NO. 40-0949-WM-0336
GUILFORD COUNTY
FILE NAME: Piedmont Triad Airport Authority

Dear Sir:

In accordance with your application received March 28, 1991, we are forwarding herewith Monitor Well Construction Permit No. 40-0949-WM-0336 for the construction of four monitor wells in the Carolina Slate Belt Hydrogeologic Unit.

Henceforth, correspondence and data relating to these wells shall be designated as specified in the subject heading above.

This Permit will be effective from the date of its issuance and shall be subject to the conditions and limitations as specified therein.

Sincerely,

Larry K. Lucas

Larry K. Lucas
Hydrogeological Regional
Supervisor

LKL/LDC/ahl
Enclosure

cc: Groundwater Section - Central Office
Guilford County Health Department
Trigon Engineering Consultants, Inc.
WSRO

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES

PERMIT FOR THE CONSTRUCTION OF
A MONITOR WELL OR WELL SYSTEM

In accordance with the provisions of Article 7, Chapter 87,
North Carolina General Statutes, and other applicable Laws,
Rules, and Regulations.

PERMISSION IS HEREBY GRANTED TO
Piedmont Triad Airport Authority

FOR THE CONSTRUCTION OF FOUR MONITOR WELLS in the Carolina Slate Belt Hydrogeologic unit located at Airport Parkway, Greensboro, North Carolina in Guilford County in accordance with the application dated March 27, 1991, and in conformity with the specifications and supporting data, all of which are filed with the Department of Environment, Health and Natural Resources and are considered a part of this Permit.

This Permit is for well construction only, and does not waive any provisions or requirements or any other applicable laws or regulations.

Construction of a well under this Permit shall be in compliance with the North Carolina Well Construction Regulations and Standards, and any other laws and regulations pertaining to well construction.

This Permit will be effective from the date of its issuance until October 1, 1991, and shall be subject to other specified conditions, limitations or exceptions as follows:

1. A permanent identification plate with the date of construction, depth of well, screen interval, depth of grout, drilling contractor, and his registration number shall be attached to the well head or the outer protective steel casing.

2. The well construction completion form and all water quality data are to be submitted to the Central Office of the Groundwater Section P. O. Box 27687, Raleigh, North Carolina 27611.
3. All laboratory analysis of Groundwater samples collected from the permitted monitor wells are to be submitted to North Carolina Department of Environment, Health, and Natural Resources, Groundwater Section, P. O. Box 27687, Raleigh, N. C. 27611 with a copy to the North Carolina Department of Environment, Health and Natural Resources, Groundwater Section, 8025 North Point Boulevard, Suite 100, Winston-Salem, N. C. 27106 within 60 days of well completion, and quarterly thereafter.
4. All additional investigative findings in relation to the pollution sources being monitored, as indicated in item J of permit application, are to be submitted to North Carolina Department of Environment, Health and Natural Resources, Groundwater Section, P. O. Box 27687, Raleigh, N. C. 27611 with a copy to North Carolina Department of Environment, Health, and Natural Resources, Groundwater Section, 8025 North Point Boulevard, Suite 100, Winston-Salem, N. C. 27106 within 60 days of well completion, and quarterly thereafter.
5. The well shall be afforded a means of protection against vandalism, damage, or unauthorized use.
6. When any monitor well is no longer useful for its intended purpose, it shall be abandoned in compliance with North Carolina Administrative Code 15. 2C.0113 and a well abandonment form sent to the North Carolina Department of Environment, Health, and Natural Resources, Groundwater Section, P. O. Box 27687, Raleigh, N. C. 27611 with a copy to North Carolina Department of Environment, Health and Natural Resources, Groundwater Section, 8025 North Point Boulevard, Suite 100, Winston-Salem, N. C. 27106.

Permit No. 40-0949-WM-0336
Page three

7. The monitor well shall be constructed in accordance with the Groundwater Section's recommended construction details as outlined in attachment #1.

Permit issued this the 1st day of April 1991

FOR THE NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

Larry D. Coble
Larry D. Coble, Regional Supervisor
Division of Environmental Management

By Authority of the Environmental Management Commission

Permit No. 40-0949-WM-0336

MAR 28 1991

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
APPLICATION FOR PERMIT TO CONSTRUCT MONITOR/RECOVERY WELL(S)

Winston-Salem
Regional Office

To: NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION March 27, 1991

Gentlemen:

In accordance with the provisions of Article 7, Chapter 87, General Statutes of North Carolina, and regulations pursuant thereto, application is hereby made by Piedmont Triad Airport Authority for a permit to construct a

(name of well owner)

monitor/recovery well(s) as described below and in the accompanying data submitted as a part of this application.

(a) Name of property owner: Piedmont Triad Airport Authority

(b) Location of property: Airport Parkway, Greensboro Guilford
(Road, Industry, Community, etc.) Town County

(c) Type of facility or site being monitored: Airport

(d) Types of contamination being monitored or recovered: Petroleum Hydrocarbons

(e) Existing monitor well numbers: 0

(f) Existing monitor wells showing contamination (well no.): N/A

(g) Estimated water-table depth: 25.0 feet

(h) Estimated date of construction: Begin April 10 Complete April 16 1991

(i) Drilling contractor: Trigon Engineering Consultants, Inc.

(j) Location of well: Provide a detailed map showing the location of the proposed well(s), and of any wells in an existing monitoring system (if applicable), in relation to the pollution source(s) being monitored and to at least two (2) nearby permanent reference points such as roads, intersections, and streams. Identify roads with State Highway road identification numbers. (Show all existing water supply wells within a radius of 1,000 feet of the proposed well.)

(k) Well construction diagram: Provide a diagram showing proposed construction specifications, including diameter, estimated depth, screens, sand pack, grout, type of materials, etc.

The Applicant hereby agrees the proposed well will be constructed in accordance with approved specifications and conditions of the Well Construction Permit. As regulated under the Well Construction Standards (Title 15 - North Carolina Administrative Code, Subchapter 2C)

P.O. Box 35005
Greensboro, NC 27425

(Mailing Address of Well Owner-Required)

(Mailing Address of Agent-if other than above)

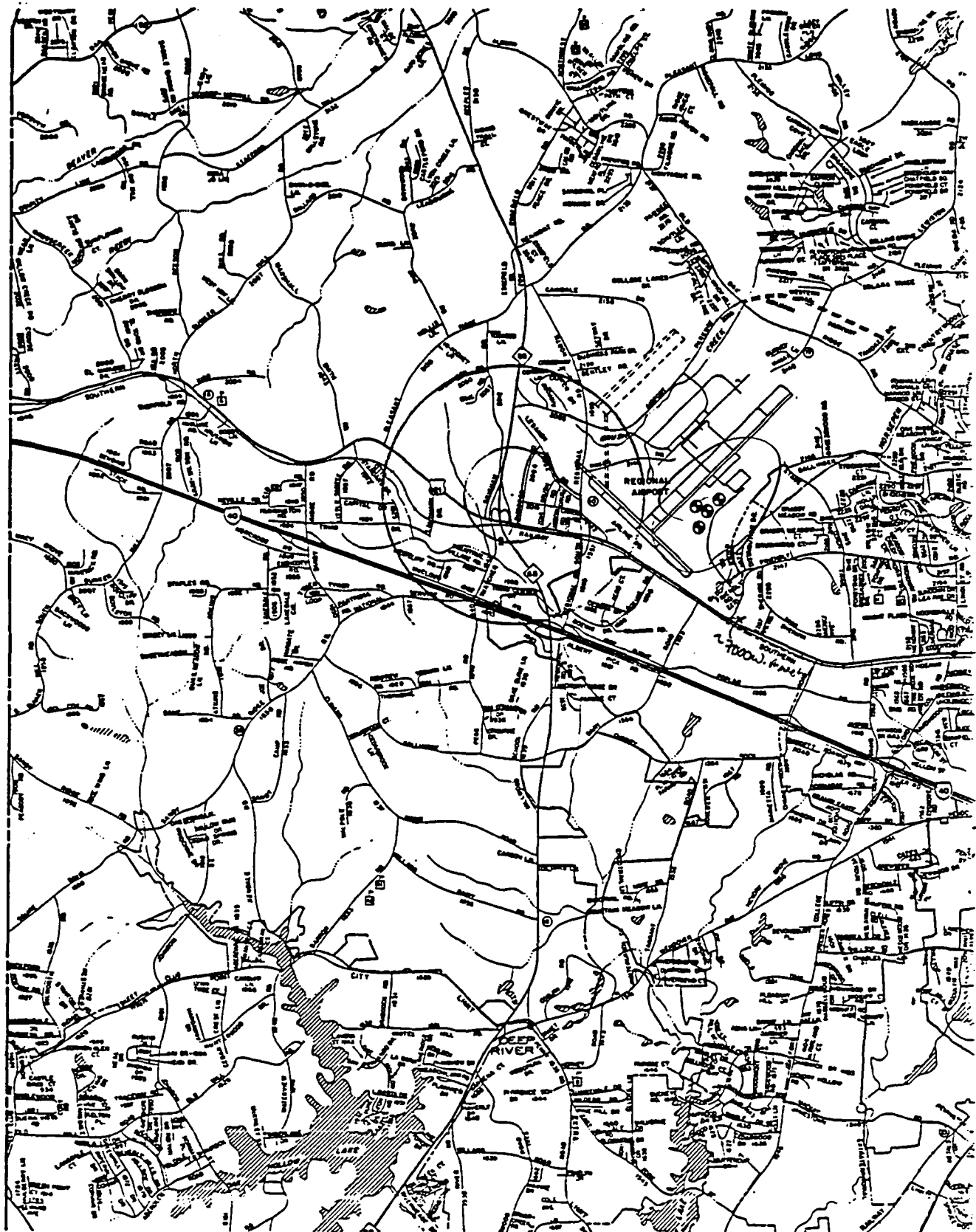
Piedmont Triad Airport Authority
A. Solomon
Signature of Well Owner or Agent

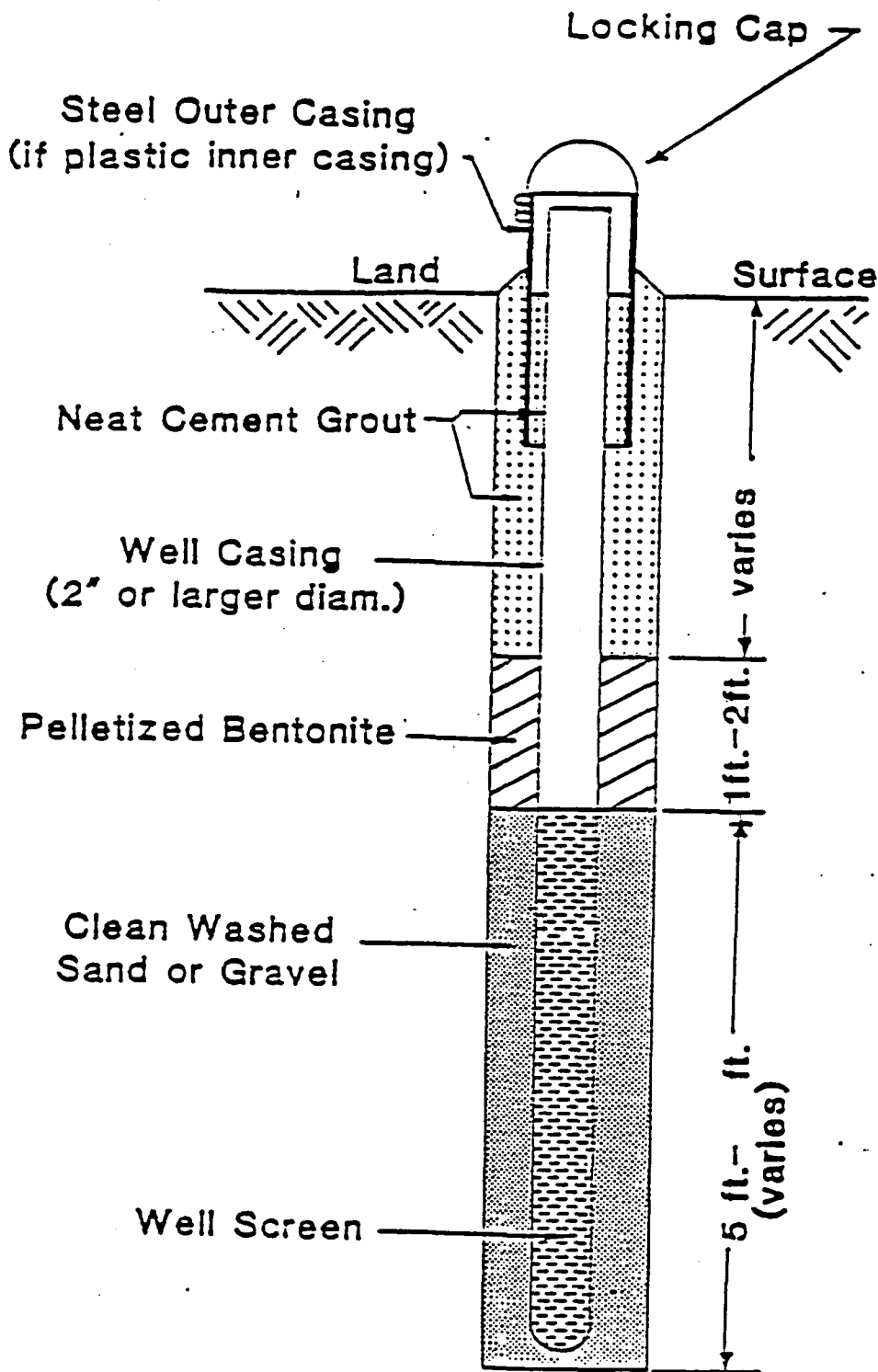
V-P Engineering and Design
Title (if applicable)

FOR OFFICE USE ONLY

PERMIT NO. _____ issued _____ 19__

NORTH





NOTE:

1. Borehole to be six inches larger than outside diameter of casing.
2. Casing and screen to be centered in borehole.
3. Top of well screen should not be above mean high seasoned water level.
4. Casing and screen material to be compatible with type of contaminant being monitored.
5. Well head to be labeled with highly visible warning saying: "Well is for monitoring and not considered safe for drinking."
6. Well to be afforded reasonable protection against damage after construction.

GWS 10/84

Recommended Construction Details For A Contaminant Monitor Well
In An Unconfined, Unconsolidated Aquifer.

Cecil Gant, James Tate, Carl Hodges, and William Bray, all of the Reidsville area, wait for tobacco to go on sale at

Smothers Warehouse. Everyone from farmers and tobacco company representatives to state and local representa-

tives attended sales Monday marking the opening of the Old Belt tobacco market. Story, B2.

John Page / News & Record

Water contaminated

State orders cleanup at planned Cessna service center site

By ALISON DAVIS
Staff Writer

Petroleum-tainted ground water has been discovered in an area where the Piedmont Triad International Airport wants to build a jet aircraft service center, officials said Monday.

The N.C. Division of Environmental Management will order the Piedmont Triad Airport Authority to clean up the spill, said Larry Coble, regional supervisor for the division's Winston-Salem office. Testing has shown contamination — benzene and toluene — in an area roughly 1,000 feet by 600 feet, Coble said.

The contamination likely won't keep Cessna Aviation Co. from opening a service center for maintenance and repairs on Citation business jets owned in the middle Atlantic states, spokesman Dean Humphrey said from the company's headquarters in Wichita, Kan.

Cessna officials, however, would want any contamination removed quickly and reassur-

ance the problem won't recur.

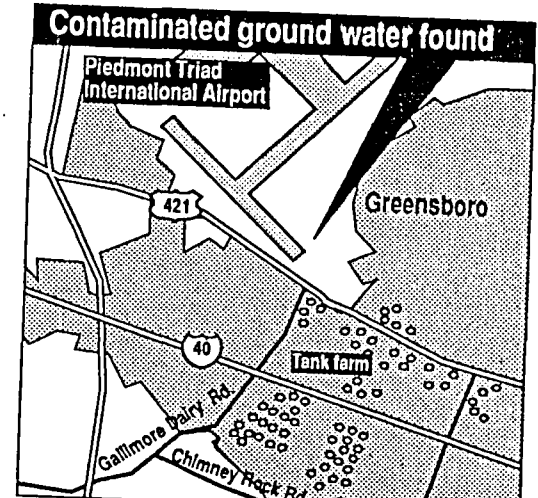
The contamination also is not believed to be a threat to drinking water, state and airport officials said. The airport uses city water, and no residences are nearby, they said.

The benzene and toluene were found in ground water north of the airport runway that runs nearly parallel to U.S. 421 and toward that runway's east end, Coble said.

The runway isn't far from the north half of Greensboro's tank farm, the target of cleanup orders because of petroleum-tainted ground water. But the tank farm probably is not the airport contamination source, Coble said.

"I don't think it's anything to do with the tank farm at all," he said.

Tracking the contamination source could be difficult, said Floyd McKenzie, the authority's executive vice president. A former hangar in the area was used for decades by several companies and the National Guard. Nearby, airport fire officials burned aviation fuel to practice extinguishing aircraft fires, he said.



Margaret Baxter / News & Record

The benzene and toluene were discovered during ground water tests performed for the airport authority by Trigon Engineering Consultants of Greensboro. Such testing has become common practice when the authority leases land, McKenzie said.

Neither McKenzie nor airport authority chairman Gene Johnston had seen the Trigon report.

Guilford County officials have asked the state for more information about the contamination. Coble will brief them today.

Film starts rolling in Liberty for 'Children of Corn' sequel

By JULIE GAMMILL
Staff Writer

LIBERTY — Standing knee-deep in the muddy Rocky River, David Price swatted at bees while explaining a scene to an actor.

No, the man in the thigh-high waders wasn't David Price, local U.S. representative. He was David Price, movie director — a sign that Hollywood has come to Liberty.

Price and his crew started filming "Children of the Corn II:

the movie's "ecological message" — is: "If you're going to pollute the land and rape it, you're going to have to pay for it."

The force that makes people "pay for it" isn't a demon, Price said. It's nature, trying to return the Earth to its normal ecological balance.

The \$1 million movie will take only a month to film, Price said. Locations include downtown Liberty and Ramseur, and near-



Airport cleans up pollution

Cessna awaits word
on contaminated soil

By JACK SCISM
Staff Writer

The cause of soil contamination at Piedmont Triad International Airport remains a mystery, but airport officials said Thursday that they think they've got it under control.

"It's a question of removing a mess made some time in the past, but we will clean it up so there will not be a continuing pollution problem," airport authority Chairman Gene Johnston said.

Johnston estimated that the cleanup has cost the airport authority \$100,000, but he said the final figure will depend on what it costs to dispose of 2,000 to 2,400 tons of contaminated dirt removed from the site.

Ted Johnson, the airport's director of development and engineering, said four disposal processes are being considered:

- Paying an area brick company to take it to their kilns. The soil can be used in brick-making.
- "Farming" the soil by spreading it out, then mixing in fertilizer and lime repeatedly for years until the contaminants disappear.
- Bringing in portable ovens to "cook" the soil, or burn the petroleum in the dirt.
- Introducing petroleum-eating microorganisms into the soil.



James Parker / News & Record

CESSNA SITE: Workers level off and relocate soil at the site of the jet maintenance center.

The contamination was found in April when engineers made test borings at a site on the airport's south side, where a jet maintenance center will be built for Cessna Aircraft Co. of Wichita, Kan.

Johnston said analyses of soil samples found traces of petroleum in the ground water in the immediate vicinity of the site, but there is no indication that it has spread significantly beyond there. Thus, removing the source of contamination — the tainted soil — is expected to resolve the problem, he said.

The airport gets water from the city of Greensboro.

Floyd McKenzie, executive vice president of the authority, said the cleanup will cause only a slight delay in construction of the Cessna

facility, which will be built by the authority and leased to Cessna on a long-term contract.

That contract will not be signed until the authority can guarantee Cessna that the site is free of contamination. He said grading at the site is almost complete and construction could start within a month.

Johnson said the contamination could have come from several sources and may go back as far as the 1940s and 1950s.

The site originally contained an aircraft maintenance hangar used first by the National Guard, later by a private company and finally by the authority for equipment storage until it was razed several years ago.

If the contamination wasn't

caused by former tenants, nearby "burn pits" used to train firefighters to extinguish fires at air crash scenes could be responsible, Johnston said. Water is pumped into these pits, then aviation fuel is sprayed on the water and ignited to simulate an airplane fire.

If tests show continued groundwater contamination, airport wells will be drilled to draw out the bad water, Johnson said.

The contaminated soil is being stored between layers of plastic away from the site while cost figures on disposal options are compiled.

■ Taxpayers may pay for tank farm cleanup — B2